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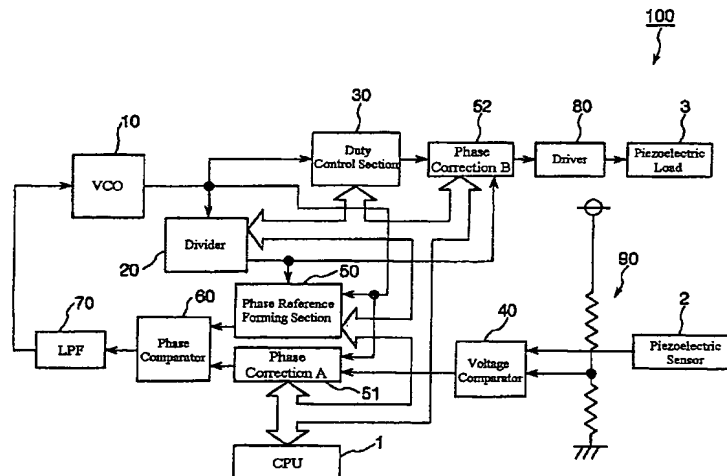
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(54) Title: A RESONANCE CONTROL APPARATUS FOR A PIEZOELECTRICAL DEVICE BASED ON PHASE SENSITIVE DETECTION



(57) Abstract: A resonance control apparatus 100 includes a VCO 10 which generates a reference signal having a predetermined frequency, a divider 20 which divides the predetermined frequency of the reference signal, a phase reference forming section 50 which delays a phase of the divided signal for a predetermined interval, a voltage comparator 40 which compares a voltage of the output signal from a piezoelectric sensor 2 for detecting the driving state of a piezoelectric load 3 in synchronization with the driving of the piezoelectric load 3 with a predetermined voltage, a phase comparator 60 which compares the phase of the output signal from the voltage comparator 40 with the phase of the output signal from the phase reference forming section 50, and a duty control section 30 for controlling a duty ratio of the drive signal supplied to the piezoelectric load 3 based on the reference signal.